

AMENDMENTS TO THE CLAIMS:

Claims 1-7 (cancelled)

8. (New) An apparatus for pulling a single crystal, comprising:
a crucible to be charged with a melt; and
an auxiliary heating device including
(i) a heating section to be located so as to surround a seed crystal at a position above and near the melt when in said crucible, and
(ii) a covering section, extending from said heating section, to cover a clearance between said heating section and the seed crystal when surrounded by said heating section.
9. (New) The apparatus according to claim 8, further comprising:
a heater around said crucible.
10. (New) The apparatus according to claim 9, wherein
said auxiliary heating device further includes a transfer mechanism for withdrawing said heating section from a passing area of a single crystal.
11. (New) The apparatus according to claim 10, wherein
said covering section is to function as a heat insulating section or a heating section.
12. (New) The apparatus according to claim 10, wherein
said covering section has a first opening for allowing the seed crystal to pass therethrough when surrounded by said heating section, with a diameter of said first opening being within a range of from 1.25 to 3.0 times a diameter of the seed crystal.

13. (New) The apparatus according to claim 10, wherein
said heating section and said covering section each have a second opening for withdrawing
from a passing area of the seed crystal when surrounded by said heating section, with a width of said
second opening being within a range of from 1.25 to 3.0 times a diameter of the seed crystal.

14. (New) The apparatus according to claim 8, wherein
said heating section is to surround the seed crystal by defining a passageway, having an axis,
through which the seed crystal is to pass, and
said covering section extends from said heating section toward said axis.

15. (New) The apparatus according to claim 14, wherein
said covering section is to function as a heat insulating section or a heating section.

16. (New) The apparatus according to claim 14, wherein
said covering section has a first opening for allowing the seed crystal to pass therethrough
when surrounded by said heating section, with a diameter of said first opening being within a range
of from 1.25 to 3.0 times a diameter of the seed crystal.

17. (New) The apparatus according to claim 14, wherein
said heating section and said covering section each have a second opening for withdrawing
from a passing area of the seed crystal when surrounded by said heating section, with a width of said
second opening being within a range of from 1.25 to 3.0 times a diameter of the seed crystal.

18. (New) The apparatus according to claim 14, wherein
said covering section extends orthogonally toward said axis.

19. (New) The apparatus according to claim 14, wherein
said covering section extends obliquely toward said axis.

20. (New) An apparatus for pulling a single crystal, comprising:
a crucible to be charged with a melt; and
an auxiliary heating device including a heating section to be located so as to surround a seed crystal at a position above and near the melt when in said crucible, said heating section having a vertically lower area and a vertically upper area, with a heating strength of said vertically lower area being greater than a heating strength of said vertically upper area.
21. (New) The apparatus according to claim 20, further comprising:
a heater around said crucible.
22. (New) The apparatus according to claim 21, wherein
said auxiliary heating device further includes a transfer mechanism for withdrawing said heating section from a passing area of a single crystal.
23. (New) The apparatus according to claim 22, wherein
a ratio of the heating strength of said vertically upper area to the heating strength of said vertically lower area is within a range of from 1: 2.0 to 1:5.0.
24. (New) The apparatus according to claim 20, wherein
said vertically upper area has a wall thickness greater than a wall thickness of said vertically lower area.
25. (New) The apparatus according to claim 24, wherein
a ratio of the heating strength of said vertically upper area to the heating strength of said vertically lower area is within a range of from 1: 2.0 to 1:5.0.
26. (New) A method for pulling a single crystal, comprising:
pulling a seed crystal from a crucible charged with a melt, through a heating section, of an auxiliary heating device, at a position above and near said melt, said heating section having a vertically

lower area and a vertically upper area, with a heating strength of said vertically lower area being greater than a heating strength of said vertically upper area,

wherein a heating power of said heating section is within a range of from 30% to 80% of a heating power necessary for enabling melting of a surface of a front portion of said seed crystal when said seed crystal is dipped into said melt so as to form a neck.

27. (New) The apparatus according to claim 26, wherein
said vertically upper area has a wall thickness greater than a wall thickness of said vertically lower area.